AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

In the claims

1-9. (Canceled)

10. (Currently amended) [[A]] The method of claim 24 ~~manufacturing a magnetic recording medium, comprising:~~

~~depositing a magnetic recording layer on a substrate,~~

~~depositing a caplayer on the magnetic recording layer and~~

~~annealing the caplayer *in situ* at a temperature of from about 150°C to about 550°C thereby manufacturing said magnetic recording medium~~, wherein the magnetic recording layer comprises CoCrPt.

11. (Canceled)

12. (Currently amended) The method of claim [[10]] 24, further comprising depositing a protective layer on the caplayer after annealing.

13. (Currently amended) The method of claim [[10]] 24, wherein annealing is carried out at from about 250°C to about 350°C.

14. (Currently amended) The method of claim [[10]] 24, wherein the annealing is carried out for less than about 30 seconds.

15. (Currently amended) The method of claim [[10]] 24, wherein the annealing is carried out for about 14 seconds at a temperature of about 300°C.

16. (Currently amended) The method of claim [[15]] 24, wherein the caplayer has a thickness of from about 0.5 nm to about 5 nm.

17. (Currently amended) The method of claim [[10]] 24, wherein prior to depositing the caplayer on the substrate, the process further comprises:

depositing a sub-seed layer on the substrate;

depositing a seed layer on the substrate;

depositing an underlayer on the seed layer and

depositing a intermediate layer on the underlayer;

wherein the magnetic layer is deposited on the intermediate layer.

18. (Original) The method of claim 17, wherein the magnetic layer comprises at least one of Co, Cr, B, Pt, Ta, and Nb.

19. (Original) The method of claim 18, wherein the magnetic layer comprises a layer of CoCrPt having a thickness of from about 100 nm to about 400 nm.

20. (Canceled)

21. (Currently amended) [[A]] The method of claim 24 ~~manufacturing a magnetic recording medium, comprising:~~

~~depositing a magnetic recording layer on a substrate,~~

~~depositing a caplayer on the magnetic recording layer and~~

~~annealing the caplayer *in situ* at a temperature of from about 150°C to about 550°C thereby manufacturing said magnetic recording medium~~, wherein the magnetic recording layer comprises Co and Cr.

22. (Canceled)

23. (Currently amended) ~~The method of claim 22~~ A method of manufacturing a magnetic recording medium, comprising:

depositing a magnetic recording layer on a substrate,

depositing a caplayer on the magnetic recording layer and

annealing the caplayer *in situ* at a temperature of from about 150°C to about 550°C thereby manufacturing said magnetic recording medium, wherein the caplayer comprises Cr and wherein the caplayer further comprises Mn.

24. (Currently amended) ~~The method of claim 23~~ A method of manufacturing a magnetic recording medium, comprising:

depositing a magnetic recording layer on a substrate,

depositing a caplayer on the magnetic recording layer and

annealing the caplayer *in situ* at a temperature of from about 150°C to about 550°C thereby manufacturing said magnetic recording medium, wherein the caplayer comprises Cr, wherein the Cr content is less than 15 atomic percent.

25. (New) The method of claim 23, wherein the magnetic recording layer comprises Co and Cr.

26. (New) The method of claim 23, wherein the magnetic recording layer comprises CoCrPt.

27. (New) The method of claim 23, further comprising depositing a protective layer on the caplayer after annealing.

28. (New) The method of claim 23, wherein annealing is carried out at from about 250°C to about 350°C.

29. (New) The method of claim 23, wherein the annealing is carried out for less than about 30 seconds.

30. (New) The method of claim 23, wherein the annealing is carried out for about 14 seconds at a temperature of about 300°C.

31. (New) The method of claim 23, wherein the caplayer has a thickness of from about 0.5 nm to about 5 nm.

32. (New) The method of claim 23, wherein prior to depositing the caplayer on the substrate, the process further comprises:

depositing a sub-seed layer on the substrate;

depositing a seed layer on the substrate;

depositing an underlayer on the seed layer and

depositing a intermediate layer on the underlayer;

wherein the magnetic layer is deposited on the intermediate layer.